

- 1           1.    A method comprising:  
2                   forming a phase change material over a heater in  
3   a pore formed in an insulator so that a first portion of  
4   said material extends over said insulator and a second  
5   portion of said material extends into said pore.
- 1           2.    The method of claim 1 including forming a pore in  
2   the insulator over a semiconductor substrate.
- 1           3.    The method of claim 2 including completely  
2   filling said pore with a metal to form a heater.
- 1           4.    The method of claim 3 including planarizing the  
2   upper surface of said insulator.
- 1           5.    The method of claim 3 including removing an upper  
2   portion of said metal in said pore.
- 1           6.    The method of claim 5 including depositing a  
2   phase change material into said pore and over said  
3   insulator.
- 1           7.    The method of claim 6 including patterning and  
2   etching said phase change material over said insulator.

1           8.    The method of claim 7 including forming a T-  
2   shaped phase change material.

1           9.    The method of claim 3 including forming a  
2   sidewall spacer in said pore.

1           10.   The method of claim 9 including depositing metal  
2   in said pore after forming said sidewall spacer.

1           11.   A apparatus comprising:  
2                   an insulator having a pore formed in said  
3   insulator;  
4                   a heater formed in said pore; and  
5                   a phase change material over said insulator and  
6   extending into said pore.

1           12.   The apparatus of claim 11 wherein said phase  
2   change material is arranged in said pore to reduce the  
3   occurrence of parasitic conductive paths.

1           13.   The apparatus of claim 11 wherein said phase  
2   change material is T-shaped.

1           14.   The apparatus of claim 11 including a sidewall  
2   spacer in said pore.

1           15. The apparatus of claim 11 wherein said pore is  
2 substantially filled by said heater.

1           16. The apparatus of claim 11 wherein said heater is  
2 metallic.

1           17. The apparatus of claim 11 including an electrode  
2 over said phase change material.

1           18. The apparatus of claim 11 wherein said phase  
2 change material is an ovonic material.

1           19. The apparatus of claim 11 wherein said phase  
2 change material is a chalcogenide.

1           20. The apparatus of claim 11 wherein the entire  
2 upper extent of said pore is filled with said phase change  
3 material.

1           21. A system comprising:  
2               a processor-based device;  
3               a wireless interface coupled to said processor-  
4 based device; and  
5               a semiconductor memory coupled to said device,  
6 said memory including an insulator having a pore formed in  
7 said insulator, a heater formed in said pore, and a phase

8 change material over said insulator and extending into said  
9 pore.

1 22. The system of claim 21 wherein said wireless  
2 interface includes a dipole antenna.

1 23. The system of claim 21 wherein said phase change  
2 material is T-shaped.

1 24. The system of claim 21 wherein said phase change  
2 material is arranged to reduce the occurrence of parasitic  
3 conductive paths.

1 25. The system of claim 21 wherein said phase change  
2 material is arranged in the upper extent of said pore to  
3 prevent the occurrence of a parasitic conductive path  
4 through said pore past said phase change material.

1 26. The system of claim 21 wherein said phase change  
2 material is an ovonic material.

1 27. The system of claim 21 wherein said phase change  
2 material is a chalcogenide.

1 28. The system of claim 21 including a sidewall  
2 spacer in said pore.

1           29. The system of claim 21 wherein said heater  
2 substantially fills said pore.

1           30. The system of claim 21 wherein said heater is  
2 metallic.

1           31. The system of claim 21 including an electrode  
2 over said phase change material.